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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/726,381 | 12/01/2000 | Eiichi Koyama | 001573 | 1263 |

23850 7590 09/27/2002

ARMSTRONG, WESTERMAN & HATTORI, LLP
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EXAMINER

PIERCE, JEREMY R

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1771

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DATE MAILED: 09/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-2

Office Action Summary

Application No.

09/726,381

Applicant(s)

KOYAMA ET AL.

Examiner

Jeremy R. Pierce

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 7-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-6 and 17-21, drawn to a ceramics structure, classified in class 428, subclass 131.
- II. Claims 7-16, drawn to a method of manufacturing a ceramics structure, classified in class 427, subclass various.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the ceramics structure can be made by spray-coating a fabric with ceramic slurry rather than immersing it into ceramic slurry.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Ken Hattori on September 16, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-6 and 17-21. Affirmation of this election must be made by applicant in replying

to this Office action. Claims 6-17 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-6 and 17-21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-6 and 17-21 recite a "three-dimension fabric-like ceramics structure". The scope of the claims is unascertainable because of the phrase "fabric-like". In what way is the structure like fabric? Furthermore, claim 18 recites a connecting layer that is "yarn-like". In what way is the material like yarn?

Claim 19 recites the limitation "said upper and lower fabric-like ceramics layers" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-6 and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kataoka et al. (Japanese Patent No. 2,149,481, provided with an English translation of the Abstract, a full English translation has been ordered).

Kataoka et al. disclose a porous ceramic body having high porosity made by impregnating a knitted fabric made from cellulose, polyamide, polyester, or acrylic fibers with ceramic material. With regard to claims 2, 3, 18, and 19 Kataoka et al. disclose multiple fabrics can be laminated to one another. With regard to claims 4, 5, 6, 20, and 21, Kataoka et al. describe the fabric suitable for use as a catalyst carrier.

9. Claims 1, 4, 17, 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Huel (U.S. Patent No. 3,189,563).

Huel discloses a knit glass fabric coated with a ceramic or other refractory material such that the open weave or large mesh structure of the glass fabric is retained (columns 2-3, lines 69-3). With regard to claims 4, 20, and 21, the ceramic material has a catalyst on its surface, since the ceramic material itself can be made of catalytic metal (column 1, lines 49-56).

10. Claims 1 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubicek (U.S. Patent No. 4,157,929).

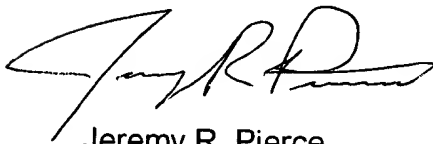
Kubicek discloses an open mesh glass fabric that is coated with ceramic material, such that a three dimensional ceramic structure with apertures is created (column 3, lines 32-68 and Figure 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

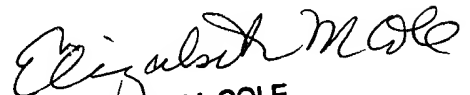
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeremy R. Pierce
Examiner
Art Unit 1771

September 24, 2002


ELIZABETH M. COLE
PRIMARY EXAMINER